

U.S. Serial No. 10/021,976  
Family Number: P2001J073

Page 5 of 8

### REMARKS

In the advisory action, the Examiner indicated that the amendment of September 10, 2003, the Amendment after Final Rejection, would not be entered because it did not place the application in condition for allowance because amended claims 1 and 16 raised new issues that require further consideration, that is, the recitation that "selected from the group consisting of ethylene, propylene, butenes, hexenes, octenes and mixtures thereof" is new and requires further search and for consideration.

The present RCE is submitted to provide the Examiner with the opportunity to review and enter amended claims 1 and 16, subject them to the new search he deems necessary and thereafter consider them on the merits.

Claims 5 and 9 were amended to claim dependence from claim 1.

Claims 1-3, 5-8 and 10-16 remain in the instant application. No new matter has been added.

Claims 1-16 were rejected under the first paragraph of 35 U.S.C. §112 as failing to comply with the written description requirement because the term "aliphatic olefinic monomer" is alleged to not have support in the instant specification. Applicants have deleted the word "aliphatic" from independent claims 1 and 16 such that this rejection is now obviated and should be kindly removed.

Claims 1 and 16 were also rejected under the second paragraph of 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner specifically alleges that "it is unclear if the olefinic monomers [in claims 1 and 16] would be reacted to produce polymer during the contacting step. In other words, while the claimed

U.S. Serial No. 10/021,976  
Family Number: P2001J073

Page 6 of 8

process is a chemical production process, a chemical reaction step is not recited." Applicants will attempt to clarify the teachings of claims 1 and 16 for the Examiner. Firstly, applicants kindly point out that the Examiner erroneously stated that instant claims 1 and 16 teach reacting olefinic monomers to produce "polymer" during the contacting step. Instead, claims 1 and 16 clearly teach methods for producing oligomers having less than 40 carbon atoms. Secondly, applicants have added the phrase "whereby an oligomer is formed" to the end of claims 1 and 16. This should clarify that the contacting step results in a chemical reaction between the olefinic monomer and the catalyst composition to form an oligomer. Moreover, the contacting steps of claims 1 and 16 are performed under oligomerization conditions, which will result in a chemical reaction between the olefinic monomers and the catalyst composition. The above amendments and arguments should clarify the teachings of claims 1 and 16 for the Examiner.

The phrase "such as" in claim 4 was rejected as being indefinite. This rejection is rendered moot by the instant cancellation of claim 4.

Based on the above responses and amendments, applicants respectfully request that the rejections under the first and second paragraphs of 35 U.S.C. §112 be removed.

Claims 1-4, 9 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by the English Abstract of Japanese Patent No. 70007522B. The Examiner avers that the Japanese Patent discloses a step of contacting ethylene in the presence of a catalyst substantially the same as applicants' claimed process. Applicants respectfully disagree with this rejection. First, applicants amended claim 1 to further distinguish the olefinic monomers used in the instant oligomerization process from the disclosure in the Japanese Patent of reacting butadiene and ethylene. Amended claim 1 now teaches that one or a mixture of the olefinic monomers from dependent claim 9 (which is now cancelled from the instant case) are contacted with a catalyst composition to form a oligomer. Second, the Japanese Patent discloses a co-oligomerization reaction, while

U.S. Serial No. 10/021,976  
Family Number: P2001J073

Page 7 of 8

claim 1 teaches a homo-oligomerization reaction. And last, the Japanese Patent's disclosure of reacting butadiene with ethylene does not teach each and every element (or limitation) of instant claims 1-3 and 10, so this §102(b) rejection is wholly inappropriate. Thus, this §102(b) rejection should be properly removed.

Claims 1-5 and 7 were rejected under 35 U.S.C. §103(a) as unpatentable over the Po, et al. reference. It is alleged that Po, et al. discloses "contacting ... styrene (olefinic monomer) with a catalyst substantially the same as applicants' claimed in the presence of solvent." Applicants respectfully disagree with this rejection. In view of the amendments made to instant claim 1, applicants believe that claim 1 and the claims depending therefrom are not obvious in view of Po, et al. The olefinic monomers taught in amended claim 1 are quite distinguishable from the styrene monomer used in Po, et al., such that one skilled in the art would not be motivated to run the oligomerization process of instant claim 1 from the disclosure of polymerization in Po, et al. Moreover, one skilled in the art would not be motivated to oligomerize the olefinic monomers taught in present claim 1 based on the disclosure in Po, et al. of styrene polymerization. Hence, this §103(a) rejection should be removed.

The Examiner also rejected claims 6, 8 and 11-16 under 35 U.S.C. §103(a) in view of Po, et al., the previously cited Japanese Patent, Masters, et al. (U.S. Patent No. 4,533,651), and Wang, et al. (U.S. Patent No. 6,120,692). For the reasons specified in applicants' arguments dated May 15, 2003, applicants respectfully disagree with these rejections and are of the opinion that the cited claims are clearly distinguishable from the listed references.

It is respectfully requested that the Examiner reconsider this case in light of the previously unentered amendment of September 10, 2003 and the present comments, and that he allow the claims and pass the case to issue in due course.

Respectfully submitted,



Joseph C. Wang  
Attorney for Applicant(s)  
Registration No.: 44,391  
Telephone No. (908) 730-3665

☒ Pursuant to 37 CFR 1.34(a)

ExxonMobil Research and Engineering Company  
(formerly Exxon Research and Engineering Company)  
P. O. Box 900  
Annandale, New Jersey 08801-0900

JCW:dws  
October 7, 2003

RECEIVED  
CENTRAL FAX CENTER

OCT 08 2003

OFFICIAL